TANNEROCORIS NEW GENUS, AND NEW SPECIES OF MIRIDAE (HEMIPTERA) FROM THE WESTERN UNITED STATES

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Tannerocoris, n. gen.

The claws and arolia are very similar to those of *Nevadocoris* Kngt. which places the genus in subfamily Phylinae. In my key to the genera of Phylinae (1968) this form runs in the couplet with *Oncotylus* Fieb. and *Nevadocoris* Kngt. *Tannerocoris* differs from *Nevadocoris* by the rows of rather large black spots on the femora; from *Oncotylus* it differs by the more slender antennae, and by the wider head and broader vertex.

Description.— Second antennal segment slender, its thickness only half that of first segment. Dorsal surface clothed with appressed, silvery, sericeous pubescence, and sparsely intermixed with suberect pubescent hairs. Legs only with black spots; tibial spines with a small black spot at base of each. Type of genus: *Tannerocoris sarcobati*, new species.

This genus is named for Dr. Vasco M. Tanner who has served as editor of the *Great Basin Naturalist* for the past thirty years. For several decades Dr. Tanner has been influential in the growth and development of public recreation facilities, of conservation of natural resources, of civic affairs, and of graduate education in the biological sciences in Utah and neighboring states. He is also recognized nationally and internationally as an outstanding entomologist, particularly as a great authority in knowledge of the great order Coleoptera.

I take great pleasure in naming this new genus for Dr. Tanner as a memorial to him among the perpetual generic name books and catalogs of zoological science.

Tannerocoris sarcobati, n. sp.

Male.— Length 4.2 mm, width 1.36 mm. Head: width .95 mm, vertex .48 mm; pale, clypeus black, frons black each side of pale median line; vertex pale but with a rounded black spot each side and touching eye margin; lorum with black but margins narrowly pale; eyes brown. Rostrum, length 1.22 mm, reaching to apex of middle coxae, pale yellowish. Antennae: segment I, length .30 mm, black; II, 1.32 mm, cylindrical, thickness .07 mm, yellowish, basal half more or less infuscated, pubescence very short and inconspicuous; III, .85 mm, dusky yellow; IV, .37 mm, pale fuscous. Pronotum, length .64 mm, width at base 1.19 mm; lateral margins of disk rounded, disk pale, basal half more or less infuscated, calli black; propleura fuscous to black, ventral margin pallid. Mesonotum ex-

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posed, pale to dusky, middle third fuscous. Scutellum nearly flat, basal half slightly convex, pale to fuscous.

Dorsal surface clothed with appressed, silvery, sericeous pubescence, intermixed with short, recumbent, pallid to brownish, simple pubescent hairs. Hemelytra pallid, shaded with fuscous; cuneus and embolium more pallid; membrane pale fuscous, veins pallid. Ventral surface fuscous to black, clothed with moderately abundant, appressed, silvery, sericeous pubescence. Legs pallid, tinted with pale yellowish; hind femora with a row of moderately large fuscous spots on dorsal aspect, a second row of slightly smaller fuscous spots along middle of anterior aspect, ventral margin with five or six smaller fuscous spots; tibiae pale yellowish, spines black, each with a blackish spot at base; tarsi pale yellowish to dusky, claws black. Genital segment typical of Phylinae.

Female.— Length 4.1 mm, width 1.6 mm; embolar margins moderately arcuate. Head: width .98 mm, vertex .54 mm; pallid, black areas similar to male, but black patch each side of frons less extensive. Rostrum reaching to apex of middle coxae, pallid. Antennae: segment I, length .31 mm, thickness .07 mm, pale to dusky; II, 1.26 mm, cylindrical, slender, thickness just half that of segment I, pale to dusky yellow, pubescence short and recumbent; III, .85 mm, dusky yellow; IV, .34 mm, dusky. Pronotum, length .62 mm, width at base 1.29 mm; disk only slightly convex; disk pallid, calli flat, black, propleura with fuscous area on middle. Mesonotum white, small fuscous area on middle; scutellum pallid. Hemelytra pallid, subtranslucent, not infuscated; membrane slightly dusky, veins white. Pubescence very similar to that of the male. Ventral surface pallid to white. Legs pallid, black spots very similar to those in the male. The venter opaque white.

Holotype.— ♂ June 19, 1932. Yakima, Washington (A. R. Rolfs). Allotype: same data as for type. Paratype: 2♂, 10♀ taken with the holotype on the host, *Sarcobatus vermiculatus*. 6♂, 2♀ June 5, 1930, Yakima, Washington (A. R. Rolfs). Colorado: 1♀ June 15, 1904 (E. S. G. Titus), "on sugar beets." 2♀ July 19, Durango (Russian). Idaho: 2♂ March 31, 1969, Black Pine, Oneida County; ♀ June 13, 1969, Holbrook, Oneida County (G. F. Knowlton). 2♂ May 31, 1969, Black Pine, Oneida County; Utah: 1♀ May 31, 1969, Curlew Junction, Box Elder County (G. F. Knowlton). South Dakota: 2♀ June 27, 1937, Martin (H. C. Severin).

Europiella knowltoni, n. sp.

Runs in my key to the species of *Europiella* (1968) to the couplet with *nigrofemoratus* Kngt., but differs from it by the pale and unspotted tibiae.

Male.— Length 4.8 mm, width 1.5 mm. Head: width .95 mm, vertex .52 mm; black. Rostrum, length 1.02 mm, reaching upon middle coxae, pallid to fuscous. Antennae: segment I, length .27 mm, width .11 mm, black; II, 1.36 mm, pale yellowish to light fuscous, thickness only slightly less than segment I; III, .85 mm, yellowish;

IV, .37 mm, pale fuscous. Pronotum, length .51 mm, width at base 1.21 mm; brownish black. Mesoscutum exposed, and along with scutellum, brownish black. Hemelytra fuscous brown, subtranslucent, clavus and cuneus more brownish black; membrane fuscous, veins somewhat darker.

Dorsal surface clothed with moderately thick, recumbent, brownish simple pubescence, and intermixed with appressed, silvery, sericeous pubescence. Ventral surface brownish black. Legs brownish black, but tibiae pale yellowish to dusky, spines black but without spots at base, tarsi dusky yellow. Genital segment and claspers very similar to generic type.

Female.— Length 3.6 mm, width 1.6 mm. Head: width 1.02 mm, vertex .56 mm, brownish black. Rostrum, length 1.19 mm, reaching to apex of middle coxae, brownish black. Antennae: segment I, length .27 mm, thickness .10 mm, black; II, 1.15 mm, cylindrical, thickness just two-thirds that of segment I, pallid to pale yellowish, apical one-fifth fuscous brown; III, .54 mm, yellowish brown; IV, .27 mm, dusky brown. Pronotum, length .54 mm, width at base 1.22 mm, brownish black. Dorsal surface brownish black; embolium and basal half of corium paler brown. Pubescence very similar to male. Ventral surface brownish black, also bearing sericeous, silvery pubescence. Legs very similar to the male.

Holotype.— ♂ May 31, 1969, Black Pines, Oneida County, Idaho (G. F. Knowlton); Knight Collection. Allotype: ♀ June 6, 1969, Curlew Reservoir, Oneida County, Idaho (G. F. Knowlton). Paratype: 5 ♀ taken with the holotype.

This species is named for the collector, Dr. George F. Knowlton, long-time member of the Experiment Station staff at Utah State University, who is very active in collecting and making known the insect species of Utah.

Europiella multipunctipes, n. sp.

In my key to the species of *Europiella* (1968), this species runs in the couplet with *sparsa* Van Duzee from which it may be separated by the numerous small fuscous dots on the femora; ventral surface of body never with black.

Male.— Length 3.2 mm, width 1.3 mm. Head: width .88 mm, vertex .47 mm, pale yellowish, never with black. Rostrum, length .95 mm, reaching upon apex of middle coxae, pale yellowish. Antennae: segment I, length .20 mm, pale; II, .816 mm, pale yellowish, with minute pale pubescence; III, .58 mm, dusky; IV, .34 mm, dusky. Pronotum, length .47 mm, width at base 1.08 mm; pale yellowish. Mesonotum exposed, and with scutellum pale yellowish. Hemelytra pallid to yellowish, in part subtranslucent; cuneus color similar to corium; membrane pallid to clear, veins white.

Dorsal surface clothed with appressed, silvery, sericeous pubescence, intermixed with recumbent, dusky to fuscous simple pubescence; color varies with angle of light. Ventral surface pallid to yellowish, never with fuscous. Legs pallid, femora with numerous

small fuscous dots, rows not well established; tibiae pallid, spines pale to brownish, a fuscous dot at base of each.

Female.— Length 3.1 mm, width 1.5 mm. Head: width .92 mm, vertex .54 mm; pallid to yellowish. Rostrum, reaching to apex of middle coxae. Antennae: segment I, length .17 mm, pallid; II, .81 mm, pale yellowish; III, .51 mm, pale; IV, .34 mm. Pronotum, length .51 mm, width at base 1.12 mm. Dorsal surface pallid; pubescence very similar to that of the male. Ventral surface pallid. Legs pallid, femora marked with fuscous dots similar to the male.

Holotype.— ♂ July 12, 1965, Elko, Nevada (H. H. Knight); Knight Collection. Allotype: ♀ same data as the type. Paratype: 2♂, 10♀ taken with the types. All specimens were swept from a shrub I thought must be an *Atriplex*.

Europiella basicornis, n. sp.

In my key to the species of *Europiella* (1968)this species runs to couplet 11, but differs from both *stigmosa* (Uhl.) and *angulatus* (Uhl.). Legs pallid but hind femora with numerous fuscous microdots; second antennal segment pallid, black at base; segment I black.

Male.— Length 3.0 mm, width 1.3 mm. Head: width .75 mm, vertex .44 mm; pallid. Rostrum, length .95 mm, just reaching upon apex of middle coxae, pallid, apical segment black. Antennae: segment I, length .20 mm, black, apex narrowly pallid; II, .75 mm, pallid to yellowish, with black band at base; III, .58 mm, pale to dusky; IV, .37 mm, dusky. Pronotum, length .40 mm, width at base .64 mm; pallid. Mesonotum and scutellum pallid. Hemelytra uniformly pallid to milky white, cuneus included; membrane clear, veins opaque white. Dorsal surface clothed with pallid, simple, suberect pubescent hairs, intermixed with more appressed, silvery, sericeous pubescence. Ventral surface pallid to fuscous, sternum and venter more fuscous. Legs pallid, femora with numerous micro to small fuscous dots, more abundant on hind femora; tibial spines black, with a prominent black spot at base of each; base of tibia, or knee, with a large prominent black spot; tarsi pale to fuscous.

Holotype.— ♂ July 13, 1965, Coalville, Utah (H. H. Knight); Knight Collection.

Europiella monticola, n. sp.

In my key to the species of *Europiella* (1968) this species runs in the couplet with *concinna* Reut., but differs in the pallid color; hemelytra pallid, but with membrane dark fuscous on apical half.

Male.— Length 4.1 mm, width 1.4 mm. Head: width .88 mm, vertex .51 mm; pale yellowish. Rostrum, length .98 mm, reaching upon apex of hind coxae, pallid, apical segments three and four, black. Antennae: segment I, length .24 mm, dark fuscous to black; II, 1.63 mm, cylindrical, fuscous; III, .68 mm, fuscous; IV, .40 mm, fuscous. Pronotum, length .54 mm, width at base 1.32 mm, pallid to dusky. Mesonotum pallid, slightly fuscous on middle. Scutellum pallid. Hemelytra pallid, slightly subtranslucent; membrane dark

fuscous, areoles somewhat paler, veins opaque white. Dorsal surface clothed with pallid to yellowish, simple recumbent pubescence, intermixed with a limited amount of more appressed, sericeous, golden yellow pubescence. Ventral surface pallid, but genital segment fuscous. Legs pallid, femora with a dorsal row of indistinct, shattered fuscous spots, ventral margin with five or six definite fuscous dots, also a row of indistinct fuscous dots along middle of anterior aspect; tibial spines black and with a black spot at base of each; tarsi fuscous.

Female.— Length 3.4 mm, width 1.4 mm. Head: width .92 mm, vertex .57 mm; pallid. Rostrum, length .81 mm, reaching to apex of middle coxae. Antennae: segment I, length .20 mm, yellowish; II, .74 mm, yellowish to dusky fuscous; III, .51 mm, fuscous; IV, .34 mm, fuscous. Dorsal surface color and pubescence very similar to that of the male. Ventral surface pallid. Legs pallid, spotting on femora and tibiae similar to that of male.

Holotype.— ♂ July 11, 1964, near Rabbit Ears Pass, alt. 9680 ft., Colorado (H. H. Knight); Knight Collection. Allotype: ♀ taken with the type. Paratype: 1♂, 1♀ taken with the types. Specimens were swept from a small shrub resembling *Artemesia* that grew in a depressed spot along the highway.

Literature Cited

Knight, Harry H. 1968. Taxonomic review: Miridae of the Nevada Test Site and the western United States. Brigham Young Univ. Sci. Bull., Biol. Ser. 9(3):1-282, 318 figs.